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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,938	02/01/2002	Stephen J. Kovacic	115-01 US Div(2)	9218

25319 7590 05/06/2003

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EXAMINER

PHAM, THANH V

ART UNIT

PAPER NUMBER

2823

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,938

Applicant(s)

KOVACIC ET AL.

Examiner

Thanh V Pham

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-16 and 22-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-16 and 22-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 31 March 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. The *amended* abstract of the disclosure is objected to because "The transistor device formed using the sacrificial mesa results in the base layer SiGe from being affected" should be--The transistor device formed using the sacrificial mesa results in the base layer SiGe not being affected--. Correction is required.
2. The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following item in the amended paragraph [0062] is not understood: "The term thickness is understood by those of skill in the art as a thickness of a layer in a direction perpendicular to a plane of a surface of a wafer on which the layer is formed". It is not always so, sometimes thin uniform thickness of a layer is applied in the horizontal intended direction.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant should be careful not to introduce any new matter into the disclosure (i.e., matter which is not supported by the disclosure as originally filed).

3. The rejections are maintained as stated in the Office action mailed 12/31/02.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "controllable *thickness*" in claims 30-32 is a relative term which renders the claim indefinite. The term "controllable *thickness*" is not defined by the claim, the specification, *even amended*, does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear *how much the* thickness is recited because it is not clear what is recited through use of "substantially reproducible *results*".

6. Claims 10-16 and 22-29 are rejected under 35 U.S.C. 102(a) as being anticipated by Yamazaki U.S. Patent No. 5,955,745.

The Yamazaki reference disclose a device comprising: a silicon substrate 23 forming one of a collector and an emitter (fig. 8), the substrate being of a first conductivity type (col. 9, lines 24-35); a layer of SiGe27 of a second conductivity type covering at least a portion of the silicon substrate; and a first layer of polysilicon 29 of the second conductivity type at least substantially supported by and covering a substantial portion of the SiGe layer with the exception of a window region, *the layer of SiGe having its surface unaffected by a process of etching within the window region, the first layer of polysilicon forming a SiGe base terminal of the transistor; and, a second layer of polysilicon of the first conductivity type covering and contacting the unetched SiGe base of the transistor, said layer of polysilicon forming the other of the collector and the emitter.*

An insulating layer 30 separates the two layers of polysilicon.

7. The Affidavit under 37 CFR 1.132 filed 03/31/03 is insufficient to overcome the rejection of claims 10-16 and 22-29 based upon achieving a window region within the p-type polysilicon layer 29 as set forth in the last Office action because: Applicant's statement at page 2 that a timed etch is inherently etches the underlying layer is conclusory and not sufficiently probabative of the relevant issues to enable a reasonable trier of fact to determine that the statement is true.

8. Applicant's arguments filed 03/31/03 have been fully considered but they are not persuasive.

Applicants' arguments are based on figures 6a through 7b of '745. However, the rejections are based on the second embodiment of the Yamazaki reference which mainly concentrates on the complete single bi-polar transistor of fig. 8.

Applicants argue that patterning of layer 29 inherently affects layer 28. However, a timed etched stopping at the point of exposing layer 28 would leave layer 28 unaffected as recited. Note that figures 12A-12E do not show patterning of layer 28.

Applicants' claims are drawn to a single device and not an array of devices, a method of making a device or a method of making an array of devices.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh V Pham whose telephone number is 703-308-2543. The examiner can normally be reached on M-T (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers

Application/Control Number: 09/988,938

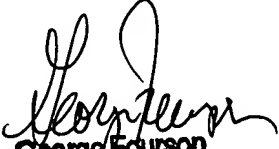
Page 5

Art Unit: 2823

for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TvP
May 2, 2003


George Fourson
Primary Examiner